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Dr. KEENAN'S LECTURES ON THE FUNCTIONS OF THE LUNGS.

We feel great pleasure in laying before the readers of the [redacted] the following extract from the *Ulster Times* of December 3, 1842, being the subject of a short course of Lectures lately delivered in the Athenæum of that town by our late townsman, Dr. Keenan :—

We have refrained from noticing these Lectures hitherto, till we should have some knowledge both of the subject and the Doctor's manner of treating it. His first proposition is, that breathing is a process which generates a galvanic force, and that that force is nothing but bodily strength or animal spirits. The proof of this is derived from facts in chemistry and galvanism, which show that air, joining with charcoal and hydrogen, (the chemical combination which takes place in breathing,) cannot but result in a galvanic influence ; that whatever increases the galvanism produced in breathing, increases our strength, and whatever diminishes the former, diminishes the latter also. For instance, camphor, ammonia, or alcohol, which have a strong affinity or appetite for air, and which, therefore, in joining with air, must generate much galvanic force, are well known, for the time at least, to increase bodily strength. Again, warm and moist air (which contains less oxygen to combine with the charcoal and hydrogen in the food) produce, on the contrary, indisposition to motion, weakness, and lowness of spirits. Lastly, whatever increases or diminishes electricity in the electrifying machine, in like manner increases or diminishes the energy of the animal body.

The second proposition is, contrary to what has ever been supposed, that the most of food is not for the purpose of *nourishing* (composing) the animal texture, but is primarily for the purpose of combining with the air to generate the moving power ; because if air is for the purpose of joining with the food, some of the food must consequently be for the purpose of joining with the air. This view divides food into two kinds ; first, that which has a strong affinity for air—viz. oils, fats, meal, and sugar—and which may be called food for the production of energy ; and, second, that which is of a similitude with the animal texture, being required to compose them, and which had its type in white of eggs, cheese, and fibrine. It follows, from this view of the subject, that milk and eggs, which are destined by nature to form the bodies of young animals, may be very improper food, in large quantities, for adults, as they require more of an oxidizable food, such as butter and flour, to generate animal spirits, than plastic, to form the body, which is already made. So long as food was supposed to be for nutrition alone, it was not easy to perceive what became of it ; because the body did not continually increase, although a man continued to eat. To account for this paradox, an hypothesis was adopted which has no foundation in nature, viz. that there is a constant removal of old particles, and a constant deposition of new, so that the whole of the body is renewed every seven years. The reasons given to show the fallacy of this hypothesis would take up more room than can be given to this article, and we shall, therefore, content ourselves by exemplifying the arguments of the Doctor, who remarked, that when a fat man takes a fever, and becomes emaciated, his emaciation is no proof that the real staminal parts of his body have changed ; because fat is no part of the body, as such, but is merely a depository of digested food (charcoal and hydrogen), which, in the absence of eating, the constitution delivers up to the air, to combine with the oxygen, for the production of force to keep the blood in circulation, and to maintain other natural actions. Neither is there any proof in the famous experiment of feeding animals on madder ; for, although in time the dyed textures of the animal becomes white, this is to be attributed to the absorption of this colouring matter as a *foreign material*, and not to a removal of the coloured textures themselves. Neither are experiments made upon starved animals of any value; because it is easy to show that certain changes must then take place, which cannot occur when the animal is naturally fed.

The third fundamental proposition is, also, a dependency on the first, viz. that the strength of the body is a *constant quantity;* that is, every person, according to the quantity of air that his lungs combine with well-digested food (charcoal and hydrogen, in the venous blood) has a fixed amount of energy. If this energy or force be applied in actuating the brain in thinking, it cannot, at the same time, be applied in actuating the limbs in walking; or, if it be used in sustaining strong passion or sentiment, it cannot be applied in either of the other two. Few persons imagine when they are thinking keenly on any subject, that they are wasting their animal spirits as fast as if employed in hard labour; yet they are doing so in reality. This is the reason that political excitement, which keeps both the thinking and feeling parts of the brain in constant action, so soon exhausts the bodily powers. This view of the subject regards the brain as *passive*—as consisting of *a series of organs which are acted upon by the galvanic force generated in breathing;* whereas the ***brain*** has hitherto been considered as a *self-acting* organ, rather generating a supply of nervous energy for the rest of the body, than itself depending upon the lungs for a supply; but that the latter is the correct view of the subject, will be evident to any one from observation; for, as a general rule, it will be found that the most energetic character is connected with broad shoulders and a small head: the brain, being a passive organ, actuated by a force originating in the breathing, in order to have energy connected with a large head, the lungs require to be unusually large, just as an extensive machinery requires a large boiler. On the contrary, examples of the most sluggish or indolent characters are to be sought for among those where the head is very large in proportion to the size of the chest.

As an example of the practical bearing of the Doctor's views, we may refer to his remarks upon digestion and bilious diseases. In reference to digestion, it was stated, that the great requirement was to obtain such food as was easily changed in the stomach to fulfil its ultimate purposes; for, the digestion of the food being an act, in the first instance, which requires an expenditure of force, and as that force is conveyed from the back of the head to the stomach by means of two large nerves, food difficult of digestion abstracts an inordinate degree of energy from the head, and consequently obscures the thoughts, by impoverishing the thinking part of the brain. The prolific source of bilious diseases is inattention to the kind and quantity of the food best adapted for combination with the air. There is daily carried off by the air fourteen ounces of charcoal; if more than this quantity be taken in the food, the remainder accumulates in the blood, and must thence be sent to the liver in the form of bilious accumulations; so that either a moist atmosphere or too much food equally produces biliary derangements:—freedom from this complaint being obtained by striking a due balance between the quantity and quality of food, and the kind of atmosphere we are destined to inhabit.

In conclusion, the Doctor stated, that this was an inquiry about the animal, and took no cognizance of the fruitless speculations, either about the nature of life, or of the connexion between the soul and body, but solely about that energy which a man possesses when he starts upon a journey, but which he has lost when he gets to the end of it.

As Dr. Keenan is now developing his views in London, this extract will give our readers an idea of his subject.

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